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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,153	12/04/2003	Alfiero Balzano	BASIC-004A	6767

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STETINA BRUNDA GARRED & BRUCKER  
75 ENTERPRISE, SUITE 250  
ALISO VIEJO, CA 92656

EXAMINER
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DOERRLER, WILLIAM CHARLES

ART UNIT	PAPER NUMBER
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3744

MAIL DATE	DELIVERY MODE
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06/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/728,153

Applicant(s)

BALZANO, ALFIERO

Examiner

William C. Doerrler

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____                                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                           |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 7 of claim 1, "said diode array", lacks clear antecedent basis. The other claims listed depend from claim 1, so they are unclear by this association.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (2005-0274119) in view of Larsson et al (5,588,300).

Lee discloses applicant's basic inventive concept, solid state devices 10, which convert heat from heat source (bottle 36) and transfer the heat to a heat transmitter 41 which is located in an open ended passage with a blower 6 located at the inlet, substantially as claimed with the exception of using a cable to transfer heat. Larsson et al show this feature to be old in the solid state heat transfer art with cable 13 used to transfer thermal energy. It would have been obvious to one of ordinary skill in the art at the time

of applicant's invention from the teaching of Larsson et al to modify the solid state thermal transfer device of Lee by using a cable to transport thermal energy across distances while preserving thermal contact at the ends while allowing flexibility.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al (6,173,576) in view of Larsson et al (5,588,300).

Ishida et al disclose applicant's basic inventive concept, solid state devices 18, which convert heat from heat source (12) and transfer the heat to a heat transmitter 22 which is located in an open ended passage 29 with a blower 30 located at the inlet (see figure 5), substantially as claimed with the exception of using a cable to transfer heat. Larsson et al show this feature to be old in the solid state heat transfer art with cable 13 used to transfer thermal energy. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of Larsson et al to modify the solid state thermal transfer device of Ishida et al by using a cable to transport thermal energy across distances while preserving thermal contact at the ends while allowing flexibility.

Claims 1-4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erler et al (5,704,212) in view of Larsson et al (5,588,300).

Erler et al discloses applicant's basic inventive concept, solid state devices 26, which convert heat from heat source (the connected computer) and transfer the heat to a heat transmitter 124 which is located in an open ended passage (38,40,42) with a blower 27 located at the inlet, substantially as claimed with the exception of using a cable to transfer heat. Larsson et al show this feature to be old in the solid state heat transfer art with cable 13 used to transfer thermal energy. It would have been obvious to one of

ordinary skill in the art at the time of applicant's invention from the teaching of Larsson et al to modify the solid state thermal transfer device of Erler et al by using a cable to transport thermal energy across distances while preserving thermal contact at the ends while allowing flexibility. In regard to claims 4 and 8, line 41 of column 5 states that multistage coolers can be used.

Claims 5-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Lee, Ishida et al or Erler et al in view of Larsson et al as applied to claims 1-3 above, and further in view of Balzano (6,257,329).

Lee, Ishida et al and Erler each disclose applicant's basic inventive concept, a solid state cooling system which transfers heat from a heat source through a solid state diode (the thermoelectric devices only permit heat to travel in one direction) to a heat transmitter in an open ended passage with a blower at the inlet, substantially as claimed with the exception of using carbon graphite thermal conductive stages which conduct 5 times as much heat as copper. Balzano shows this feature to be old in the heat transfer art (see line 40 of column 2). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of Balzano et al to modify the heat transfer devices of any one of Lee, Ishida et al or Erler et al by using carbon graphite thermal conductive stages to improve the heat transfer through the system. In regard to claim 13, the cable of Larsson et al uses multiple parallel paths (separate fibers) in one cable.

***Allowable Subject Matter***

Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakagiri shows a solid state dehumidifier with solid state diodes formed on the wall of an air passage.

Spry, Bell and Luo show solid state heat transfer devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Doerrler whose telephone number is (571) 272-4807. The examiner can normally be reached on Monday-Friday 6:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
William C Doerrler  
Primary Examiner  
Art Unit 3744

WCD